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A PROFILE OF MINORITY MALE ACHIEVEMENT: A QUANTITATIVE CASE STUDY OF DATA FROM ACADEMIC YEARS 2008-09 AND 2009-10 AT PIMA COMMUNITY COLLEGE

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FROM ACADEMIC YEARS 2008-09 AND 2009-10

AT PIMA COMMUNITY COLLEGE

by

Nancee Jane Sorenson, B.S.; M.S.

Treatise

Presented to the Faculty of the Graduate School of

The University of Texas at Austin

in Partial Fulfillment

of the Requirements

for the Degree of

Doctor of Education

The University of Texas at Austin

December 2010

Dedication

This work is dedicated to the students who are the subject of this study. It is submitted with *hope* of improving their academic achievement; with *passion* as an advocate of student success; and with *purpose*, *knowledge,* and *accountability*. Such are the enduring gifts of the Community College Leadership Program, given with generosity to all who have had the privilege to study with John E. and Suanne D. Roueche.

Acknowledgments

When one has been a part of the best, it is a defining experience. No longer willing to accept anything less than the highest quality in effort, integrity, compassion, and knowledge, it is with a reluctant heart that "Blockers" steel themselves to reintegrate into the confines of regular life as an employee, family member, and citizen.

However, without the support of those in "regular" life, it is highly unlikely that participation in the CCLP would have been possible. To that end, I owe my deepest and heartfelt appreciation to my family (Ben, Sarah Jane, Eric, and parents Art and Carolyn Sweeting), friends, and colleagues, who supported me with good cheer, while I had the extraordinary fortune to be a member of Block 63 in the Community College Leadership Program. I would like to thank Pima Community College, Chancellor Roy Flores, and President Lou Albert who supported and approved the administrative leave that allowed me to be in residence at the University of Texas at Austin.

To Drs. John E. and Suanne D. Roueche, and Dr. Walter G. Bumphus, I have been graced to be a member of Block 63. The daily exposure to your leadership, teaching, and mentoring has been an academic and professional experience of unsurpassed quality and value. I cannot thank you enough for the generous scholarship support that has been afforded to me. My tenure as Graduate Teaching Assistant to Dr. Bumphus, Department Chair of Educational Administration was an honor. Special thanks and fond regards to Sarah Cale-Henson, Executive Assistant to Dr. Bumphus.

To Block 63, our enduring graduate student family and part of the CCLP legacy, each of you has a special place in my heart. I am so proud of your accomplishments.

Thank you for your humor, support, and camaraderie!

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AT PIMA COMMUNITY COLLEGE

Nancee Jane Sorenson, Ed.D.

The University of Texas at Austin, 2010

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The purpose of this study was to provide a descriptive case study of the academic achievement of minority male students over a 2-year period. It was conducted at an urban community college district, which is a Hispanic Serving Institution. Utilizing institutional data, the research examined 3,825 male and female students divided into a total of ten cohorts by gender and ethnicity. All students were 18 to 24 years of age, new-to-higher education and enrolled full time. Key findings show significant results for enrollment, departure rates and academic performance for all groups. Male students demonstrated lower rates of enrollment, higher rates of attrition, and lower academic achievement that females students. Significant results were demonstrated among male and female student performance within their own gender group and by comparison to the opposite gender of the same ethnicity. The high departure rate and achievement gaps by students who were enrolled full time, strongly suggests that student engagement, is a

profound concern. This study was conducted to identify potential disparities in achievement by gender and ethnicity to provide detailed information to inform the public and promote institutional change.

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Chapter One: Introduction

For every 100 girls enrolled in kindergarten, there are 116 boys.
For every 100 girls enrolled in high school are 100 boys.
For every 100 women enrolled in college, there are just 77 men.

-Victor Saenz, "The 'Disappearing Latino Male: Setting the Stage." (Preface, The Educational Crisis Facing Young Men of Color, College Board, 2010)

The state of minority male enrollment, retention, and completion in institutions of higher education is a concern that impacts families, communities, states, and the nation. The academic achievement of Hispanic, African American, and Native American students has been in stagnation or a downward trend over the past three decades. In the post-Vietnam War era a fourth group, that of Asian American and Pacific Islander immigrant populations, has risen to a recognized level of national consciousness. Challenging the commonly held notion that students of these origins are almost always the "model" minorities, data illuminates a population represented by at least 48 ethnic categories, speaking over 100 languages. The commonality shared with other groups is that of lowered socio-economic status and educational attainment. (CARE, 2008).

This issue is at critical proportions throughout the United States and the probability of a multi-generational negative impact on the future of millions of families across the country cannot be overstated. (Tienda, 2009; Kirsch, Braun, Yamamoto, & Sum, 2007). The College Board (2010) published, *The Educational Crisis Facing Young Men of Color*, and it revealed the results of the four days of meetings held in 2008. Each gathering, called a "Dialogue Day" (p. 2) was exclusively devoted to one of

the four ethnic/minority groups. The forum included scholars, community and government leaders, activists, and citizens to address the increasing disparity in economic and education achievement for young men of color. Seven common themes emerged consistently across all assemblies. They were:

1. A profound crisis exists in the American education of minority males, overlooked by mainstream society and leaders.
2. "Destructive community pressures" are at work, which undermine minority male aspirations and expectations for success.
3. Lack of male role models leads to a search for respect outside educational institutions.
4. Cultural and historic memory is "deeply important" to minority male identity and pride.
5. Poverty, community problems and language serve as major barriers to college access and success.
6. Schools and colleges are "failing" young men of color across multiple areas and levels.
7. Society and communities must "work together to make a difference" for these young men. (p. 10)

From these four days, a portrait of a "Third America" emerged. Expanding on the theme of "Two Americas," (Washington Post, 2004), it is a metaphor for a United States divided in two by wide economic and social factors. The *"*Third America" identified by the report, is populated by citizens who "…are primarily men, and mostly men of color. They live outside the margins of our economic, social, and cultural systems. They are the byproduct of many societal failures – including the failing of our nation's schools" (p. 2). The report further maintains that mainstream societal leaders

largely ignore the condition of men in the Third America. After the release of the report, US Congressman Raul Grijalva, D-Arizona, a native of Tucson and former Tucson Unified School District Board Member stated,

> It's gotten to the point where we're talking about, almost, a permanent underclass in this country, and that is a very, very dangerous development. And it comes at time…when the hues and the tones and the colors of this nation's face are changing. That population merits more attention now because of that demographic shift that is happening across this nation. (Education Week, August 7, 2010)

The "hues and tones and colors" so aptly expressed by Grijalva, have been the subject of intense discussion in Arizona and the nation. A judicial injunction was placed on Senate Bill 1070, the "Support our Law Enforcement and Safe Neighborhoods Act" on July 28, 2010. The court found that requiring Arizona officers of the law to "make a reasonable attempt to determine immigration status" of any person stopped for any reason; or, make it a crime for failing to carry alien registration papers; or, make it a crime for an unauthorized alien to attempt to find or perform work; or, to allow the "warrantless arrest of a person" on the suspicion of an offense that would make that person "removable from the United States" would cause "irreparable harm" to the citizens of Arizona (Bolton, 2010, pp. 33-36). Following this ruling, the United States Senate began discussion on a proposed hearing on the 14th Amendment. If convened, the hearing will attempt to discern if the original intent of the amendment was to allow any person born in the country to have citizenship, without regard to the lawful citizenship status of the parents (MSN, 2010).

Sunnyside Unified School District (SUSD), in Tucson, Arizona enrolls 17,000 students with 94.4% of students identified as a minority. Specifically, the ethnic make-up of the student body is 87.7% Hispanic, 5.6% Anglo, 4.1% Native American, 2.1% African American, and 0.5% Asian American. Approximately 86% of SUSD students are eligible for free or reduced-price meals. About one-third of students are classified as English language learners (ELL). In 2007, Sunnyside launched its nationally recognized *Project Graduation: The Digital Advantage* (SUSD, 2010). *Project Graduation* has raised attendance, freshman promotion, and high school graduation rates to previously unachievable rates. The original goal was to ensure that 556 students graduated in May 2008. Expectations were exceeded when 598 seniors received their diplomas. In 2009, 715 students graduated, setting a district record. In 2010, the record was reset when 821 students received their diploma. In three years, the district has realized a 67% increase in high school graduation. It has been estimated that 50% of the children attending the district may be undocumented residents or the children of undocumented residents (SUSD Administrator, 2009).

The largest school district in Pima County is the Tucson Unified School District (TUSD)–a majority minority district. TUSD enrolls almost 56,000 students. The demographic profile is 56.2% Hispanic, 29% Anglo, 7.6% African-American, 4.5% Native American, and 2.8% Asian American. Nine percent of TUSD students are classified as ELL and over 58% qualify for free or reduced lunch (TUSD, 2010). The Mexican-American studies program has been the subject of investigation by the State

Superintendent of Schools for over three years. This year the Arizona legislature passed State Bill (SB) 2281. It,

> prohibits courses that promote the overthrow of the US government, promote resentment toward a race or class of people, are designed primarily for pupils of a particular ethnic group, and advocate ethnic solidarity instead of the treatment of pupils as individuals. (Arizona Daily Star, August 4, 2010)

The Superintendent's latest demand is that TUSD videotape these courses to prove they are not in violation of SB 2281. School officials will not comply. "I think the voters will see past the ruse and see that No. 1, we have not done anything wrong and that we continue to ask for the conservative value of local control" (TUSD Board Member, 2010). The evidence that "destructive community pressures" exist in Arizona that could undermine the "aspirations and expectations for success" of male students in Pima County will become difficult to challenge.

In March, President Obama in a weekly video address warned,

> Unless we take action – unless we step up – there are countless children who will never realize their full talent and potential. I don't accept that future for them. And I don't accept that future for the United States of America.

Background

Located in Tucson, Arizona, Pima County Community College District (PCCCD) is an urban multi-campus district with a Fall 2010 enrollment of 35,272 credit students. A designated Hispanic Serving Institution (HSI), the college offers over 144 transfer and occupational certificates, workforce skills center training, adult basic education and family literacy courses, GED preparation, and community education to a

population center of over 1 million residents in Pima County and southern Arizona. It is governed by an elected five member Board of Governors that serves six-year terms.

Consistently listed as one of the "120 largest degree granting colleges and universities" (NCES 1994 to 2007), regular quality and performance measurements had been a challenge for the institution. Rapid enrollment growth and expansion, from the mid 1970s to the late 80s, allowed the college to grow from one to four campus locations, add education centers, and offer classes at hundreds of sites across Tucson and in Santa Cruz County, bordering Mexico. Like many colleges, growth superseded accountability. Not until the late 1990s would college-wide conversations take place regarding developmental education, student persistence, retention, and other aspects of student success not enrollment driven.

Roy Flores began his tenure as the leader of the District in 2003. Chancellor Flores has placed student learning and success as the foundation of operational planning and delivery since his arrival. He led the institution in the simplification of the mission statement to read "To Develop Our Community through Learning" (College Plan, 2004).

In 2009, Flores outlined his growing alarm over the declining rates of educational attainment of United States citizens, ages 18 to 24. Compared to attainment achieved by residents of 11other countries, the US ranks 12th. In a presentation at the National Conference on Race and Ethnicity (NCORE) he revealed that Arizona residents, ages 25-to-34, are eight percentage points lower in baccalaureate degree completion than Arizona residents ages 55-to-64. Thus, the best educated Arizonans are in the oldest age category rather than the younger. This is the reverse of trends in the

United States as a whole, and far below the attainment being achieved by the same age group in other countries (Flores & Miles, 2009). Citing the data from the 2006 National Center for Higher Education Management Systems (NCHEMS) study to discern the need for additional baccalaureate education in Arizona, the results for the state are a source of growing unease. For every 100 students in the ninth grade, 63 graduate from high school, 30 enter college directly after graduation, approximately 18 are enrolled in the second year of college, and 15 graduate within 150% of the total time of the program (NCHEMS, 2006). This trend, illustrated in Figure 1, is in direct contrast to another major finding that demonstrates high technology jobs requiring the minimum of an Associate Degree will be the fasting growing sector of employment in Pima County in the foreseeable future (p. 7).

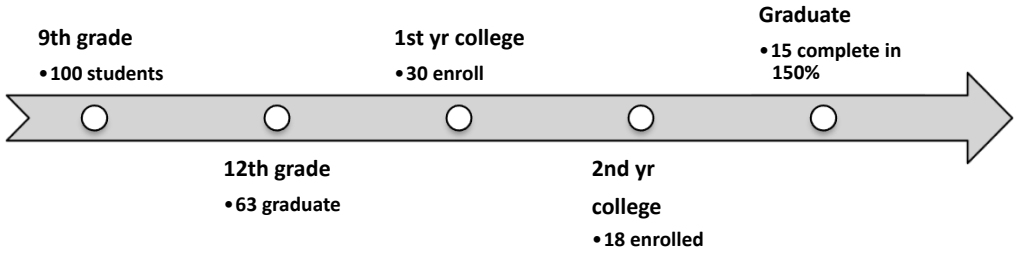

Figure 1. Proportion of students entering 9th grade and those persisting to college graduation

In addition, the report demonstrates that educational deficits are the largest in Arizona's minority and immigrant populations with males exhibiting the most need for improvement in levels of educational attainment.

The college office of Planning and Institutional Research published a report called "Environmental Scan Update: March 2008." It noted the existing 13% gender gap in male-to-female enrollment at Pima Community College as an institutional

concern. Institutional IPEDS reporting and the National Center of Education Statistics have documented the disparity of male-to-female enrollment as early as 1993 (NCES 1995). Figure 2 displays the longitudinal trend.

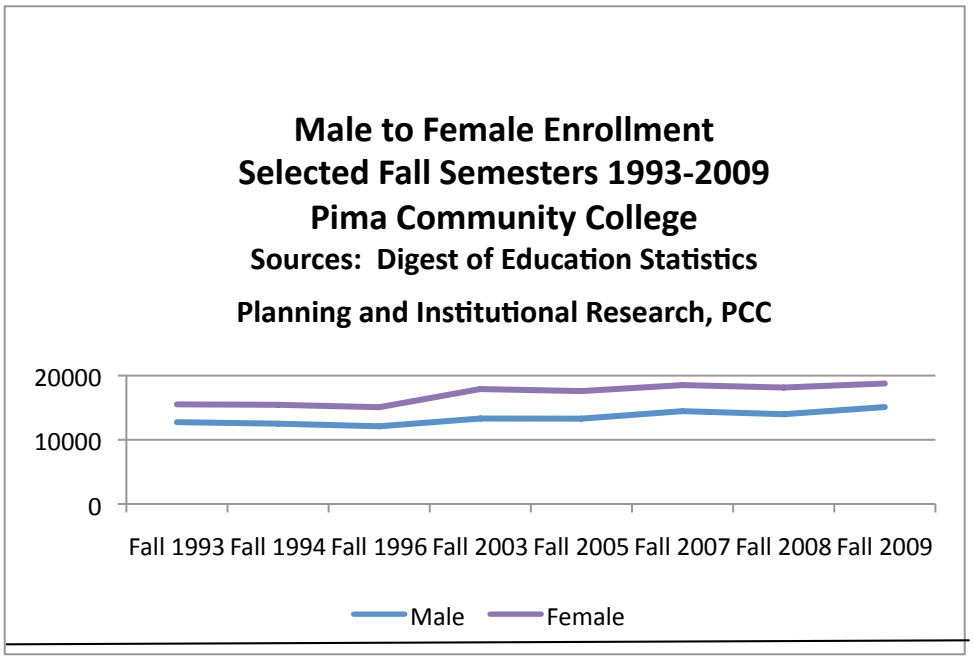

Figure 2. Male to Female Enrollment

Statement of the Problem

The educational attainment of the citizens of Pima County has not kept pace with that which is needed to address economic and quality of life issues at a local and state level (NCHEMS, 2006). Respectively, the educational attainment of 18-to-24 year old males, especially that of minority males, lags even farther behind the general populace. Pima Community College enrolls the majority of residents, ages 18-to-24, attending a postsecondary institution, with a participation rate that is four times larger than the age representation in the county (US Census, 2008).

While participation rates by ethnicity somewhat mirror the county population, male participation rates are lower than female participation rates by over 10% for the college district. The disparity is even higher at one PCCD campus, located in the southwestern part of the county. A majority minority campus, Hispanic students comprise 57.2% of the student population with female enrollment at 62.9%, and male enrollment is 37.1%, reflecting a gender gap of 25.8%. Other college evidence indicates that across every campus, male achievement is lower than female achievement in Grade Point Average (GPA), rates of persistence, completion, and transfer. While institutional data exists by gender and ethnicity overall, there is no profile of male-to-female achievement by ethnicity that provides direct comparison on student performance.

Purpose of the Study

The purpose of the study will be to provide a profile of minority male achievement for the academic years 2008-09 and 2009-10 at PCC. It will include an analysis and comparison of quantitative data available through the college department of Planning and Institutional Research; census, economic, and educational data from Pima County and Arizona; and that from sources such as the American Association of Community Colleges (AACC), Achieving the Dream (*AtD*), the National Center for Education Statistic (NCES), and the Center for Community College Survey of Student Engagement (CCSSE). The overall goal of the study will be to provide a quantitative summary of the enrollment and academic achievement of minority male students. The results of the study may aid PCCCD by presenting, (1) a comparison of academic achievement within ethnicity; and, (2) demarcate trends regarding the perceived

disparity of performance indicators associated with gender and/or ethnicity.

Research Questions

The study examines the enrollment and academic achievement of 10 student groups, ages 18-to-24, who were new to higher education and enrolled as full time students in the Fall 2008 (Academic Year 2008-09/AY 08-09) and tracks progress using a specified set of performance indicators through the Spring 2010 (Academic Year 2009-10/AY 09-10). For the purpose of the study, each group is designated as a cohort. They are:

Cohort A	Hispanic male students
Cohort A(1)	Hispanic female students
Cohort B	White male students
Cohort B(1)	White female students
Cohort C	African-American male students
Cohort C(1)	African-America female students
Cohort D	Native American/Alaskan Native male students
Cohort D(1)	Native American/Alaskan native female students
Cohort E:	Asian/Pacific Islander male students
Cohort E(1)	Asian/Pacific Islander female students

It is guided by four primary research questions that define the purpose of the inquiry. The questions are as follows:

Research Question 1: Beginning in the Fall 2008 semester, and each subsequent term defined in the study, what was the enrollment for each cohort?

Part A: For each cohort, what percentage persisted in the Spring 2009 semester?

Part B: For each cohort, what percentage were enrolled in the Fall 2009 semester?

Part C: For each cohort, what percentage persisted in the Spring 2010 semester?

Research Question 2: What was the cumulative Grade Point Average (GPA) of each cohort by term during the time period of the study?

Research Question 3: What are the "top ten" programs of enrollment for each cohort during the time period of the study?

Research Question 4: What are the statistical comparisons within all male cohorts for the following performance indicators?

a. Enrollment and participation rate
b. Persistence (semester-to semester)
c. Retention (Fall 08 to Fall 09)
d. Grade Point Average
   - by first semester (Fall 08)
   - by cumulative (Spring 10)

Definition of Key Terms

Academic Year - as defined by PCCD, it is the period from July 1st to June 30.

Fall semester - a 16-week term beginning late August and concluding in the third week of December. Within the full semester, shorter terms of enrollment occur. For this study, all terms are included in the semester.

Spring semester - a 16-week term beginning in the third week of January and concluding in the third week of May. Within the full semester, shorter terms of enrollment occur. For this study, all terms are included in the semester.

African American – a person having origins in any of the black racial groups of Africa.[1]

Asian/Pacific Islander – a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent, including, for example: Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam, or a person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

Hispanic – a person of Mexican, Puerto Rican, Cuban, South or Central American, or other Spanish culture or origin, regardless of race.

Native American/Alaskan Native – a person having origins in any of the original peoples of North and South America (including Central America) and who maintains tribal affiliation or community attachment.

White - a person having origins in any of the original peoples of Europe, the Middle East, or North Africa.

Enrollment - the total number of students enrolled in a defined term.

Persistence - used to describe student enrollment behavior, it is defined as those students who enroll in a semester and return for the next consecutive semester.

Retention - used to describe student enrollment behavior, it is defined by those students who enroll in the fall semester of an academic year and return in the fall semester of the consecutive academic year

[1] Ethnicity definitions are those used by the Department of Education in *Status and Trends in the Education of Racial and Ethnic Groups* (July, 2010)

Completion - the term used to define the successful completion of a student's stated intent or goal.

Transfer - term used to define students that leave PCCD to enroll at a four-year college or university.

"Top Ten" Programs or Certificates - the terms used to describe the 10 programs or certificates with the highest number of students enrolled.

Limitations of the Study

The research is based on aggregate, quantitative data from a single institution. It does not include classification of any student group by placement into developmental education courses or college level courses. It does not track the utilization of financial aid by students in the cohorts. The goal is to gain an intensive quantitative understanding of minority male academic achievement. From this, the institution may choose to embark on further study that will encourage actions and strategies by the College, and the community, to address improving levels of educational attainment.

Chapter Summary

Changing demographics and the decline in educational attainment for the United States and the residents of Arizona, especially that of immigrant and minority male populations, is a key issue concern. If unanswered, the impact on the economic future of its citizens will be devastating. Pima County Community College District has a challenging role ahead to ensure residents can meet the educational requirements for jobs that demand the minimum completion of the Associate Degree. In Pima County, Hispanic males earned only 7% of the total number of Associate Degrees awarded in

2007-08. At PCCD, there is an achievement gap for male students, especially minority male students when compared to female students. It is the intent of this research to more clearly identify the academic performance of male students by ethnicity, and as compared to female students.

Chapter Two: Review of the Literature

While studies on student persistence and retention have been ongoing for almost 50 years (Harvey-Smith, 2003), the research on minority students is substantially younger. In the 1970s, studies that focused on non-white students were limited (i.e. Valentine, 1971; Gurin, Epps, 1975; Olivas, 1979). The majority of work began in the 1980s (Allen, 1984; Fleming, 1984; Thomas, 1984; Nettles, Gosman, Thoeny, & Dandridge, 1985; Weis, 1985; London 1979, 1989; Nora & Rendon, 1988, 1990; Attinasi, 1989). This surge of investigative work changed the knowledge base. It advanced policy and practices that questioned traditional ways of structuring academic and student services based on research with inconsequential numbers of minority students. New studies with substantive data regarding women and students of color (Rendon, 1982; Nora, 1987; Cabrera, Nora, & Castenda, 1992; Cabrera & Nora, 1994) improved the work of Tinto's (1975, 1983, 1993) model of social and academic integration and Astin's (1985) theory of student involvement. With this information, student perceptions of prejudice, discrimination, and alienation were included as barriers to persistence and retention. Academic readiness, a key component limiting access to and success in higher education, was brought into view in 1971, by Roueche and Kirk. Roueche and Comstock (1981), McCabe (1982-83), and Boylan and White (1987), identified the importance of literacy development and developmental education as crucial to the success of minority and non-traditional student populations. Later, the inequities of access to finances to participate in postsecondary education began to emerge as a topic of investigation (Cabrera, Nora, & Castenda, 1992).

The review of literature for this study focused on three areas:

1. The evolving nature of persistence and retention models in higher education;
2. Gender and ethnicity differences in achievement and learning style; and,
3. The framework for accountability and data-driven decisions in prioritizing institutional goals around student achievement.

Persistence and Retention Models: Moving from Dominant Culture to Student Engagement

Pascarella's (1980) model of student-faculty informal contact described how both the frequency and quality of informal contact with faculty can shape student persistence and academic achievement. Just as importantly, it was the students' characteristics such as aspirations, attitudes toward college, academic achievement, and personal and intellectual development that were a powerful influence in the ease with which such informal contacts were developed (pp. 545-595). Not surprisingly, less traditional student populations reported higher levels of difficulty establishing these critical informal relationships. In a 1993 study, Love examined problems associated with the retention of African American students and found *interaction with faculty* as one of seven categories of non-cognitive variables that were most frequently named as negatively impacting retention.

In a 1995 study of Latino students experience in the first year of community college, Jalomo documented several characteristics that were barriers for students in becoming connected to their new environment. Among those were:

- Feeling afraid or out of place in mainstream college culture.
- Had experienced negative interactions with college faculty or administrative staff.

- Had a hard time adjusting to the fast pace of college.
- Were single parents or were married with family obligations.
- Lacked financial resources to take additional courses or participate in campus activities.
- Were first in the family to attend college.
- Did not have positive academic or social experiences in high school.

Numerous other studies (Kuh & Witt, 1988; Zambrana, 1988, Townsend 1994, Ramirez, 1996; Nora, Kraemer, & Itzen, 1997) confirmed that minority students in traditional institutions, including community colleges, were confronted by environments that were often apathetic and mono-cultural. Staff, faculty, or other students could be hostile and/or display overtly racist views of students' academic ability to succeed. Many colleges and universities were entrenched in the notion acculturation into the academic environment was a student responsibility, not theirs.

Community colleges were enrolling the majority of ethnic minority and non-traditional students by the 1980s. Those known for excellence in teaching instruction, innovation, and student success were recognized by Roueche and Baker in *Access & Excellence: The Open-Door College* (1987). Miami-Dade Community College was the focus of an intensive study by the authors who found that Miami Dade's commitment to teaching, climate, systems of organization, and data allowed a multicultural student population, with vast differences in academic preparation, to achieve unprecedented success. Examples of other community colleges dedicated to student success were Cuyahoga Community College, studied by Ellison (1987); Brookhaven College of the Dallas County Community College District; and the Community College of Denver

(CCD). In 1986, institutional priorities at CCD were rearranged to meet the needs of an increasing student population of ethnic minority origin, a declining economy, increasing high school dropout rates, and a high need for literacy and developmental education (Roueche, Taber, & Roueche, 1995; Roueche, Ely, & Roueche, 2001). The critical difference exhibited by these colleges was the willingness and ability to transform the institution to meet the needs of students.

Over this same period, Tinto began adjusting his model to link institutional factors to student persistence. By 1993, Tinto explained that student success involved, "the critical importance of student engagement in the learning communities of the college" (p. 132). Alexander Astin's (1985) theory of student involvement was key to the concept of student engagement. Astin defined involvement as "the amount of energy that the student devotes to the academic experience (1984, p. 27). Research has supported this as vital to student persistence and achievement (Pascarella & Terenzini, 1991; Tinto, 1987). Absent in Tinto's earlier models was the recognition that minority students experienced more difficulty in initiating involvement and may have experienced higher levels of apathy or hostility in the campus environment (Jalomo, 1995; Hurtado, 1997; Saenz, 2004). A much-needed improvement began when facilitating and increasing student engagement started to be seen as an institutional imperative. Community colleges that employed such strategies were in the forefront in acknowledging that placing the learner at the core of its mission, values, and belief's was paramount (O'Banion, 1997).

Gender and Ethnicity Differences in Academic Achievement

The United States has long recognized the role sustained lower socio-economic status has played in educational equity and achievement. Following the Civil Rights Act of 1964, the Johnson administration's vision of a *Great Society* included a *War On Poverty*. As such, Title I of the Elementary and Secondary Education Act was authorized in 1965. Named "Improving the Academic Achievement of the Disadvantaged," its purpose was to equalize funding in schools located in low-income neighborhoods, cities and counties, and to raise the academic achievement of children attending those schools. College age disadvantaged students were assisted in accessing higher education via the Upward Bound, Talent Search, and Student Support Services programs that began in 1965 from the Economic Opportunity Act of 1964. Since that time, billions of dollars have been allocated to improve the educational attainment of minority and other disadvantaged populations. The Feminist Movement, at a zenith in the late 1960s through the late 1970s, sought to equalize and advance opportunities for women and girls in all aspects of American life to include health, education, and employment. Women, along with members of ethnic minorities, became part of the "protected" classes under the Equal Employment Opportunity Act of 1972, or Title VII of the Civil Rights Act of 1964. This barred discriminatory practices in employment based on gender, age or ethnic origin (Ed.Gov, 2010).

A significant call for additional educational reform was published in 1983 with *A Nation at Risk.* This treatise proclaimed that education was "drowning in a rising tide of mediocrity" at the primary, secondary, and postsecondary levels. During this same

period, the increasing need for developmental and remedial education was being noted by community colleges all across the country. The *Secretary's Commission on Achieving Necessary Skills* (SCANS): *What Work Requires from Schools* Report was produced in 1990. Documenting the need by employers for improved math, critical thinking, communication, and technology skills in high school graduates, it projected that by year 2000, the majority of jobs in the United States would require a minimum of the Associate's Degree. In 2002, Congress passed the *No Child Left Behind* legislation, which mandated more rigorous reporting and performance requirements for elementary and secondary public education with harsh sanctions to be applied if standards were not met. Kirsch, Braun, Yamamoto, and Sum (2007) stunned the educational and business communities with its dire prediction of the outcome of "the confluence of three powerful forces" that could end the "American dream of prosperity" (p. 3). Through benign indifference or abject neglect the "rising tide of mediocrity" has become *America's Perfect Storm*, a tsunami of potentially damaging proportions never experienced in the United States. The three forces are:

- Divergent skill distributions of literacy and numeracy among school-age and adult populations (Force One),
- Profound restructuring of the US workplace (Force Two), and
- Sweeping demographic changes (Force Three) (p. 4).

Academic Achievement and Gender Gap. "Boys at risk: The gender achievement gap" appeared in the American School Board Journal in April 2006. Noting that boys were now the largest "subgroup" (p. 1) of disadvantaged students in a Boulder Colorado school district, it confirms that educational research has known about

the decline in male achievement for the last 20 years. Lowered achievement in elementary schools is believed to be fostered by the system's inability to recognize and value the learning style differences that originate in brain chemistry and male sex hormones. These differences are responsible for the development of the physical and mental abilities in boys. Younger boys would benefit by four to five recesses a day, according to William Pollack, Harvard psychologist and author of *Real Boys* (1998). Boys need to perform more and sit less (p. 2). Traditional classrooms, focused on sitting, listening, reading, and writing for concentrated periods of time are not "boy friendly" (Gurian, 2010). Likening it to an "industrial schooling system" he stated, "it's not the way boys learn best, and their grades show it."

Smart Boys, Bad Grades, (Coates & Draves, 2006) a report sponsored by the Learning Resources Network, confirmed that the traditional teaching methods and system requirements found in the majority of K-12 schools, ignore the basic learning needs and styles of boys.

> Overnight school boards – without any cost involved – could put more than a million boys into college, simply by not penalizing them for late homework. As long as you continue to punish boys for late homework, they're not going to get into college. They may learn. They may increase their knowledge. But they won't have the grades. (p. 5)

Pollack created a curriculum that was tested in 27 public and private schools in the San Francisco Bay area. It includes educational video games and computers as learning tools. It was designed to "create classrooms that are more comfortable to boys" (p. 5). In classrooms that have replaced lectures with lessons that are taught in shorter time periods, utilize small groups, and give boys opportunities to demonstrate mastery in

ways through performance; reading and writing skills have been shown to increase to achieve levels even with, or surpassing that, of girls (p. 6). School officials stated that it was imperative to recognize the learning style differences and create avenues of excellence for both girls and boys. Adjustments were made to the method and style of instruction that allowed each group to achieve.

Even though gender and cultural differences in college student persistence have been studied in relationship to the quality and frequency of interaction with faculty, there are fewer indicators that college and university faculty are adjusting instructional methodologies to accommodate learner needs. The majority of instruction continues to occur in a lecture format, although it is now enhanced by the addition of instructional technologies that provide software, are more web-based, and utilize on-line forms of collaboration and discussion. The traits of millennial, "gen-x" and "gen-y" student populations are a much-studied topic. However, their presumed efficacy and use of technology does not directly translate to the skill needed for academic achievement. At Pima Community College, basic computer literacy and academic computing workshops were added in January 2010 to meet the widespread disconnect reported by faculty (Appendix A).

Learning style research has revealed the correlation of improving academic success by matching style to the instructional environment. O'Banion's (1997) *A Learning College for the 21st Century* emphasized the need for faculty to be in a continuous assessment process in evaluating student characteristics and abilities in order to improve student learning outcomes. Writing about the multiple intelligences that

students bring to the classroom, (i.e., cultural, emotional, and preference in learning styles) he cited the work of Guild (1994). Guild found that ethnicity and gender are associated with the approach students take to understanding the environment in the following ways:

- Students of Mexican-American origin have high regard for family and personal relationships and a preference for cognitive generalizations and patterns. In the classroom, they are more likely to seek personal relationships with faculty and tend to perform better with broad concepts, rather than specific facts and components.
- African-American students tend to more highly value oral experiences, physical activity, and loyalty in interpersonal relationships. Students prefer instructional activities such as discussion, active projects, and collaborative work.
- Native American students value and develop stronger visual discrimination abilities and skills in the use of imagery, perceive globally, and demonstrate reflective thinking patterns. Students need time for quiet thinking and benefit from visual stimuli.
- White Americans tend to value independence, analytic thinking, objectivity, and accuracy. In the classroom, this indicates a preference for competition, information, tests, grades, and linear logic. These patterns were identified as those most prevalent in American schools. (p. 88)
- Women tend to value collaborative learning, cooperative problem solving and socially based knowledge. Students may prefer practical application and "hands on" experiences.

In O'Banion's vision of a 21st century community college, faculty and students would be engaged in a complete collaborative process, wherein *all* participants would be provided the resources needed to achieve the mission of learning. Jones and Mokhtari

(2003) looked at the effectiveness of instruction grappling with the multiple traits of a widely diverse student population such as age, ethnicity, English proficiency, income, and readiness for college level instruction. Concerned about the 40% student attrition rate reported as a national average for community colleges (AACC, 2010) the researchers were looking at more effective strategies to empower students by teaching them "how to learn" (p. 364). Jones and Mokhtari recognized that the probability of the rapid implementation of easily adaptable teaching styles and modes of instructional delivery, could not realistically keep pace with the needs of emerging student populations. The question they sought to answer centered on students' ability to recognize their learning style and adapt it to the learning demanded by the discipline.

The basis of the research utilized Kolb's 1984 model of learning styles and learners who demonstrate a preference for one of four modes of learning. These modes of learning, identified by Kolb (1984), were based on his synthesis of Carl Jung's work that dealt with the varying approaches that people use in perceiving and processing information. The four modes of learning are: (1) Concrete Experience, (2) Abstract Conceptualization, (3) Active Experimentation, and (4) Reflective Orientation. The model emphasizes that all information is perceived along a processing continuum. Learners have a preference in the processing of information. As a result, students place into a *type* that is dependent on the dominant mode of learning that is most often used to understand information. The types of learners are: (1) Divergers, who learn by combining Concrete Experience with Reflective Observation to create a learning style that can view concrete situations from various viewpoints, (2) Assimilators, who learn

by reflecting on abstract concepts and putting the information in logical form, (3) Convergers, who learn by taking abstract ideas and actively experiment to find practical uses for the information by finding solutions to problems, and (4) Accommodators, who learn by taking concrete experiences mixed with active experimentation with a hands-on experiences (pp. 365-366).). Figure 3 illustrates Kolb's learning styles and the interaction of modes and types along a processing and perception continuum.

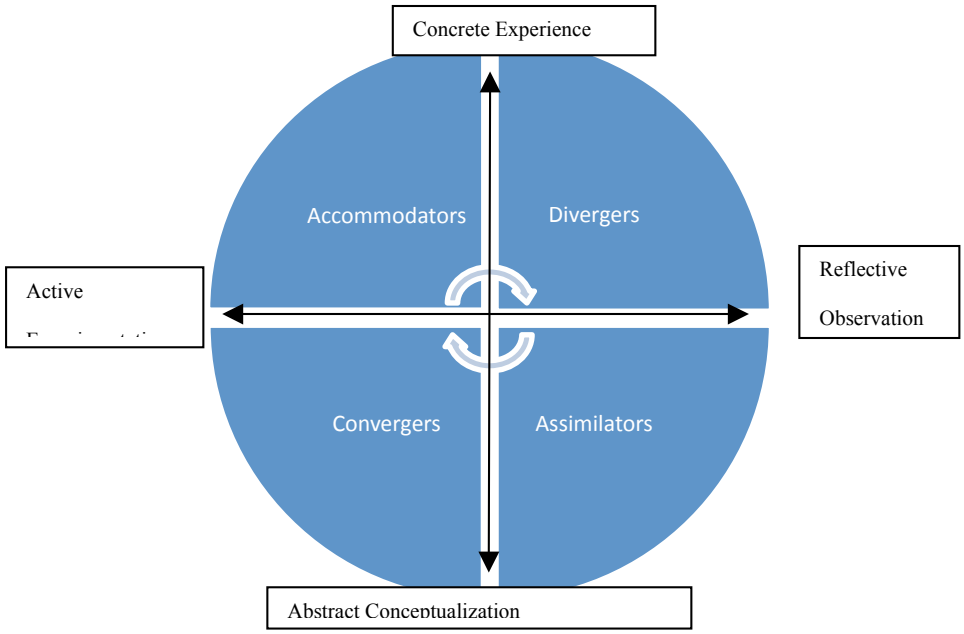

Figure 3. Kolb's Learning Styles

The study determined that students do adapt or "style flex" depending on the subject matter that is being learned. It also established a connection between learner type and GPA. Interestingly, the study did not produce differences among gender. The Assimilators (3.40) achieved the highest GPA among all students in the study, followed by Convergers (3.21), Divergers (2.94), and Accommodators (2.67) (p. 367). Levels of

significance were established for GPA by type. Assimilators had significantly higher GPA's than Divergers or Accommodators, and Convergers were significantly higher in GPA over Accommodators. In discussing the non-significant results in learning style mode preference by gender, the authors noted that more males than females have traditionally occupied the Assimilator category. In the bulk of most learning style research, males tend to prefer traditional analytical learning and classroom environments (Philibin, Meier, Huffman, & Boverie, 1995, as cited in Jones & Mokharti, 2003) and females tend to prefer more "nontraditional learning and classroom environments in the concrete experience learning mode" (p. 373) and are more likely to be in the diverger or accommodator learning style quadrants.

Jones and Mokharti concluded that the GPA achieved by the Assimilator group was a match to the traditional lecture teaching style, which they believe is the most predominant mode of instruction offered by community colleges. Three recommendations that came from the study were; (1) colleges should include assessments that evaluate learning styles to increase student awareness of their preferred style and give them the ability to have more control of their learning habits and strategies, (2) college faculty and staff "can and should" accommodate the diversity of "personal experiences, knowledge bases and learning styles" by adapting teaching and advising strategies. A range of strategies are needed for effective teaching rather than a single, inflexible approach, and (3) productive professional development with the necessary resources that include time, incentives and other tools, should be a part of a commitment by leadership.

Frameworks of Accountability in Student Achievement

Effecting changes in student achievement requires, as stated above, a commitment by leadership. More than resources, it requires a fundamental dedication to accountability, evidence, and data. The American Association of Community Colleges (AACC), in partnership with the College Board and the American Association of Community College Trustees (ACCT), launched the Voluntary Framework of Accountability (VFA) initiative in 2009. With funding from the Lumina and the Bill and Melinda Gates Foundations, the initiative's purpose is to be a multi-phase model of effectiveness that will allow community colleges to demonstrate measures of student progress and completion. It will serve as a national platform to provide constituencies vital information about community colleges and their ability to meet workforce, economic, and community needs. The AACC states,

> The VFA initiative comes at a critical moment for community colleges. As a nation we have focused on increasing access to higher education but have neglected completion and success rates. Among community college leaders there is a growing concern that providing access to students is not enough and that colleges must also assume responsibility for increasing the success rates for students. (2010)

Roueche, Baker, and Brownell (1971) spoke to the concept of college leadership assuming responsibility for results almost 40 years ago. They stated, "Accountability is far more than a glib term or 'in' word. It is an operational concept…accountability is a privilege – not a burden" (Roueche et al., 1971, p. 8). According to Roueche et al., successful implementation of accountability must include four critical characteristics.

Those are:

1) Accountability is focused on results that are made up of the outcomes of the system, rather than enumerating what it is composed of. "…Teaching causes learning. If no learning occurs, then no teaching has taken place!" (pp. 6-7).
2) Accountability requires measurement rather than document volume or mass. When "looking at how well students are being taught" (p. 7) use relative criteria, objectives and measurement techniques.
3) Accountability assumes and shifts primary responsibility to learning from the student to the college.
4) Accountability diffuses through the college community by starting at the top, with the board and president. It sweeps down, over and through so that "the administration, the students, the instructors…[so that all are] accountable to the community served by the college" (p.8).

Accountability is not complete without using the results to implement change. "Data should be used not only for accountability, but also for the explicit purpose of improving student outcomes and institutional performance" (Morest & Jenkins, 2007, p. 4). When O'Banion wrote about the importance of the learning college in the 21st century, he envisioned a place of continuous assessment, collaboration, and improvement, where the needs of the learner (student) would be placed front and center at all times. A learning college model is guided by six principles, the first of which is the "creation of substantive change in individual learners" and the last is "the definition of success is data-driven based on improved and expanded learning" (p. 47). Engaging the students "as full partners in the learning process" was another substantive change,

because it required that learning be a collaborative, 360-degree process, where the student assumes responsibility for their choices.

In 2001, the Community College Survey of Student Engagement (CCSSE) was established as a project of the Community College Leadership Program at the University of Texas at Austin. Its purpose was to provide information about institutional effectiveness as seen through the lens of the student. The results were measures of student *engagement* or connection to the college. Most importantly, it was hoped that colleges would use the outcomes of their students' self-reported measures of engagement to improve student learning and retention. Now a Center, CCSSE has set internationally recognized benchmarks of effective educational practices in community colleges. A function of both student behaviors and institutional systems that contribute to improved student achievement, the measurements are:

- Active and Collaborative Learning
- Student Effort
- Academic Challenge
- Student Faculty Interaction, and
- Support for Learner

The scope of the data is enormous. Since 2008, almost 404,000 students have taken the survey at 658 colleges in 47 states and eight locations outside the United States.

CCSSE's 2008 Annual Report was entitled: *High Expectation and High Support.* The topic for that year was defining the elements of engagement as reported by both students and faculty during the time period of the survey. Recalling that the hallmark of effective engagement is a collaborative process (O'Banion, 1997, 2007;

Tinto, 1993; Gardner, 1987), the results of the faculty survey (CCFSSE) indicated that there are several opportunities for professional development. The survey of faculty found that: (1) almost 31% reported spending 50-100% of their time lecturing, (2) 53% allocate less than 10% of class time to group activities, (3) 89% report spending less than 20% of their time on in-class writing, and (4) 50% spent no class time on computers. Characteristics of the "Least Engaged" students were reported and some mirror the subjects of this study. They students who reported the lowest involvement with college were: (1) traditional age – 24 years of age and younger, (2) male, (3) of all ethnicities (but not African-American), and (4) United States citizens. Other traits that reported as contributing to lower levels of engagement were attending part-time, completion of less than 30 credits, working more than 30 hours per week and those who had not taken developmental education courses, had not taken a study skills course, and had not attended an orientation.

Chapter Summary

Student enrollment, persistence, and completion of students' stated goals in higher education have been the subject of study for over 50 years. Until the 1980s the majority of data about student behavior was based on research involving White male students. Student perceptions of alienation, prejudice, fear, and a lack of involvement with a college or university were evident by the end of the decade. Community colleges enrolled the majority of minority and non-traditional students who attended post-secondary institutions. They were serving students with an ever-increasing need for developmental education, English proficiency skills, and little exposure to higher

education. Even though access improved, other levels of student achievement were declining. Tinto's model of social and academic integration was bolstered by Astin's theory of student involvement – leading to the tenet of Student Engagement. Engaging students, to increase improved levels of achievement and learning, is now a benchmark of effective practice. Ironically, increasing and frequent reports of skills deficits, declining mastery of mathematics and literacy and substandard levels of academic preparation were being made about the performance of students at the primary, secondary, and postsecondary levels. Policy makers and educational leaders will be hard pressed to prove that it was not ignored. Male students have experienced the largest percentage of lowered academic achievement and educational attainment in a 30-year period. And, minority male students are the most negatively impacted of this group. Measured achievement in mathematics and literacy are in decline, as are completion of academic goals and credentials. Factors such as learning style differences, coupled with the co-requisite to adapt instruction to teach students with a range of style preferences, appears to be recognized, but widespread implementation is lacking. Accountability and increased standards of performance are at an unprecedented high and educational leadership must be focused on improving student performance and completion. The American Association of Community Colleges has made this part of the national agenda.

Chapter Three: Research Methodology and Design

Introduction

A descriptive quantitative study based on the existing research about minority male achievement, and the contextual backdrop of the heightened social and economic need to improve the educational attainment of men, both in the Arizona and the United States, is being used to direct this study. This chapter describes the relevance of the design and methodology to meet the defined purpose of the study and research questions.

Purpose of the Study

The purpose of the study is to provide a profile of minority male achievement for academic years 2008-09 and 2009-10 at PCCCD. It includes an analysis and comparison of quantitative data available through the college department of Planning and Institutional Research; census, economic, and educational data from Pima County and Arizona; and that from sources such as the American Association of Community Colleges (AACC), Achieving the Dream (*AtD*), the National Center for Education Statistic (NCES), and the Center for Community College Survey of Student Engagement (CCSSE). The overall goal of the study is to provide a descriptive quantitative summary and analysis of the enrollment and academic achievement of male students, by ethnicity, and all female students by ethnicity. This information is not directly available to policy makers, institutional leaders, or the community. The results may assist the institution and others in providing a more detailed baseline from which to evaluate

student performance by gender, within ethnicity, and compared to female performance within ethnicity.

The study examined the enrollment and academic achievement of 10 student groups, ages 18-to-24, who were new-to-higher education, enrolled in 12 credit hours or more in the Fall 2008 (Academic Year 2008-09/AY 08-09). It tracked their progress using a specified set of performance indicators through the Spring 2010 (Academic Year 2009-10/AY 09-10). For the purpose of the study, each group is designated as a cohort. They are:

Cohort A	Hispanic male students
Cohort A(1)	Hispanic female students
Cohort B	White male students
Cohort B(1)	White female students
Cohort C	African-American male students
Cohort C(1)	African-America female students
Cohort D	Native American/Alaskan Native male students
Cohort D(1)	Native American/Alaskan native female students
Cohort E:	Asian/Pacific Islander male students
Cohort E(1)	Asian/Pacific Islander female students

The study was guided by four primary research questions that define the purpose of the inquiry. The questions were:

Research Question 1: Beginning in the Fall 2008 semester, and each subsequent term defined in the study, what was the enrollment for each cohort?

Part A: For each cohort, what percentage persisted in the Spring 2009 semester?

Part B: For each cohort, what percentage were enrolled in the Fall 2009 semester?

Part C: For each cohort, what percentage persisted in the Spring 2010 semester?

Research Question 2: What was the cumulative Grade Point Average (GPA) of each cohort by term during the time period of the study?

Research Question 3: What are the "top ten" programs of enrollment for each cohort during the time period of the study?

Research Question 4: What are the statistical comparisons within all male cohorts for the following performance indicators?

a. Enrollment and participation rate
b. Persistence (semester-to semester)
c. Retention (Fall 08 to Fall 09)
d. Grade Point Average
   - by first semester (Fall 08)
   - by cumulative (Spring 10)

Quantitative Case Study Methodology

This descriptive quantitative study uses the concepts descriptive design and ex-post-facto data to assess the academic achievement of minority male students in Academic Years 2008-09 and 2009-10 at Pima County Community College District. In quantitative research the goal is to determine the relationship between an independent variable and a dependent variable within a population (Salkind, 2008). This type of study design is used to identify patterns or trends among variables, not the cause and effect of variables. The primary reasons this was designed as a descriptive study was: (1) identify enrollment behavior and academic achievement of male students by ethnicity, (2) identify enrollment behavior and academic achievement of male students within ethnicity, (3) identify enrollment behavior and academic achievement of female

students within ethnicity, and compare to male students within ethnicity, and (4) identify areas for further research.

The College and the researcher agreed on the scope of the study. The researcher met with the Executive Vice Chancellor and Provost to determine the feasibility of the study and request for data. The study was approved and the researcher was given access to ex-post-facto aggregate data for students who entered in the Fall Semester of 2008. This semester was selected because: (1) it provided recent data regarding the selected student populations, (2) the period of the study was long enough to establish performance indicators that may be more likely to demonstrate stability of a pattern or trend, and (3) student data aggregated by gender within ethnicity was not available.

The first task was to identify all students, entering PCC in the Fall Semester of 2008, who were eligible to be included as cohorts for this study. Using the selection criteria of age, gender, ethnicity, new-to-higher education and full time enrollment status, 3,825 students, from the total enrollment of 32,605 (PCCCD, 2009) comprised the sample. The sample was calculated from institutional data of all students who were enrolled at the semester census date (the 45th day of the semester) and were counted in the end-of-term data. Table 1 describes the student sample utilized in the study.

Table 1.

Description of Student Sample, N = 3825

Student Cohorts Ages 18-24, enrolled full time (12+ credit hours)	Number Enrolled Fall 2008	Percent Enrolled Fall 2008 (of N=3825)
A0. Hispanic Male	690	18.04
A1. Hispanic Female	697	18.22
B0. White Male	881	23.03
B1. White Female	932	24.37
C0. African American Male	106	2.77
C1. African American Female	75	1.97
D0. Native American/Alaskan Native Male	55	1.44
D1. Native American/Ak Native Female	72	1.88
E0. Asian/Pacific Islander Male	76	1.99
E1. Asian/Pacific Islander Female	59	1.54
F0. Other/multi-racial Male	92	2.41
F1. Other/multi-racial Female	90	2.35
TOTAL	3825	

During the initial data analysis and selection, it was discovered that 92 males, self-identified as "other/multi-racial" as did 90 females. This group is included for informational purposes only and were not included the study. Other groups excluded were all students who met the initial selection criteria, and were not coded (n = 611) and not reported (n=13) for ethnicity.

Dependent and independent variables. The study is on two levels in terms of the utilization of dependent variables.

Level One: The dependent variables are enrollment, persistence, and retention beginning in Fall 2008, persistence from Fall 2008 to Spring 2009, and retention from Fall 2008 to Fall 2009. The independent variables thought to influence the dependent variables are race/ethnicity, and/or gender.

Level Two: The dependent variable is GPA. The independent variables thought to influence the dependent variable are race/ethnicity and gender.

The data that comprise the variables were extracted from the College student information system (*Banner*™, SCT). The database is managed and maintained by the Office of the Registrar/Enrollment Services reporting to the Executive Vice Chancellor/Provost for Academic and Student Services.

Student data that is self-reported and used in this study included: (1) gender, (2) race/ethnicity, and (3) selection of the program or certificate of enrollment.

Validity. Validity determines whether an instrument measures what it intends to measure and whether it measures it accurately (Dudley, 2005). While there is no measure that is absolutely valid, utilizing a measure with the highest validity possible is a standard of quality (Dudley, 2005). The module on the student information system that records grades, calculates GPA, records and calculates enrollment, credit hours attempted, enrolled and completed, is not self-reported data. Further, the data goes through additional validation on a yearly basis by external audit. In the 2009-10 academic year the institution re-validated all race and ethnicity data for students and employees through a survey on the college portal system. Data regarding student enrollment into the selected program or certificate is verified at least once a semester by

students' use of the on-line registration system. Students may submit additional corrections to other self-reported data either online or in person. Certain types of updates to self-reported data require documentation (i.e. change of name, residency, citizenship)

Data analysis. Data analysis was conducted using the statistical software package SPSS. Characteristics of the participants are described using the descriptive statistics procedures in SPSS. Frequency and summary statistics are used to describe the variables. The appropriate tests of Pearson Chi-Square, T-test, and Oneway Analysis of Variance (ANOVA) were applied to the data used to derive the answers to the research questions. When appropriate, Post-Hoc Mutiple Comparisons, or the Least Squared Difference (LSD), were developed to test for significance among cohorts.

Chapter Summary

This chapter summarizes the methodology and research design that was used in research. A quantitative descriptive study was selected as the appropriate method because the goal of the research is to identify trends or patterns that may exist in the academic achievement of minority male students. It does not seek to establish a causal relationship between any variables.

Chapter Four: Results

Introduction

The sample size, or total number (N), for the study was comprised of 3,825 students. This number represents 11.73% of the total enrollment at PCC in the 2008 Fall semester. Students were new-to-higher education, age range 18-to-24, and enrolled full-time. One thousand nine hundred or 49.67% were male, and 1925 or 50.33% were female. Figure 4 illustrates the demographic enrollment. Data were analyzed using the Pearson Chi-Square for enrollment patterns, the T-test for analysis of GPA as well as the Oneway Analysis of Variance (ANOVA) to test for any significance of differences in GPA within the male cohorts.

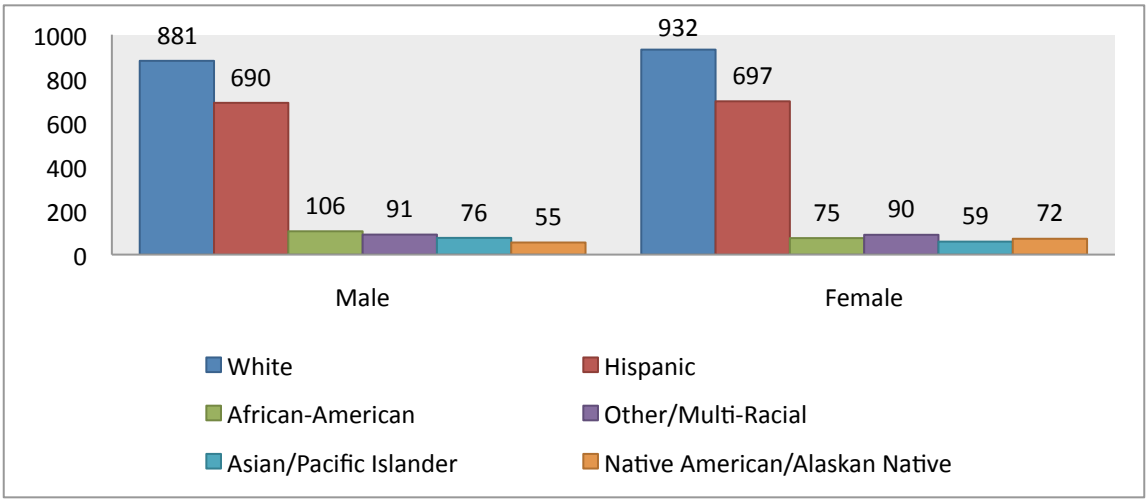

Figure 4. Research Question One: Enrollment of each Cohort, Fall 2008

Research Questions and Analysis

Research Question 1. *Beginning in the Fall 2008 semester, and each subsequent term defined in the study, what was the enrollment for each cohort?*

Part A: For each cohort, what percentage persisted in the Spring 2009 semester?

Part B: For each cohort, what percentage were enrolled in the Fall 2009 semester?

Part C: For each cohort, what percentage persisted in the Spring 2010 semester?

The enrollment for each student cohort in the Fall 2008 Semester was calculated and is shown in Figure 4 above.

Part A: Persistence Fall 2008 to Spring 2009. Part A calculated the number and percentage of each student cohort that began in Fall 2008 and continued enrollment in the Spring 2009 semester. The total size of the sample decreased from 3825 to 2357, and represented a loss of 1468 students or -38.4%. Persistence for the entire sample was 61.6%. The persistence rate by gender was differentiated by 1%, as shown in Table 2.

Table 2.

Enrollment Pattern for Spring 2009 by Gender

Gender Group	Enrolled Fall 2008 (Original Cohort)	Number Not Enrolled Spring 2009	Number Enrolled Spring 2009	Percentage Not Enrolled Spring 2009	Percentage Enrolled Spring 2009
Female	1925	738	1187	38.3	61.7
Male	1900	730	1170	38.4	61.6
Total	3825	1468	2357	38.4	61.6

Pearson Chi-Square χ^2 = .03, df=1, p= .958

Male students declined by 730 students or –38.4% for a persistence rate of 61.6% or 1170 enrolled.

Table 3 is a cross tabulation of the persistence enrollment patterns for male cohort for the Spring 2009 semester. The instances of significance will be addressed in Research Question 4. Of particular note is that enrollment decreased for every male cohort by a range of 32.9% for Asian males to 47.3% for Native American males.

Table 3.

Persistence Enrollment Pattern for Spring 2009 for Male Cohorts

Male Cohort Group	Enrolled Fall 2008 (Original Cohort)	Number Not Enrolled Spring 2009	Number Enrolled Spring 2009	Percentage Not Enrolled Spring 2009	Percentage Enrolled Spring 2009
Hispanic	690	239	451	34.6	65.4
White	881	368	513	41.8	58.2
African American	106	37	69	34.9	65.1
Native American	55	26	29	47.3	52.7
Asian	76	25	51	32.9	67.1
Total	1808	695	1113	38.4	61.6

Pearson Chi-Square $\chi^2 = 11.706$, df=4, p= .020

Female students declined by 738 students or -38.3%, for a persistence rate of 61.7% or 1187 enrolled. The persistence rate for each female cohort was: (1) Hispanic females – 70%; (2) White females – 55%; (3) African American females - 54.7%; (4) Native American/Alaskan Native females at 61.1%; (5) Asian American females – 76.3%. Overall the Asian American/Pacific Islander students had the highest rate of persistence with an average of 71.1% enrolled in the Spring 2009 semester and White students persisted in the next semester at the lowest rate of 56.6%.

Part B: Retention: Fall 2008 to Fall 2009. Retention was defined as the number of students whose first term of enrollment was the Fall 2008 semester and who were subsequently enrolled in the Fall 2009. From a starting sample size of N=3825, 1774 students remained enrolled in the Fall 2009 semester. This represents a loss of 2051

students (53.6%) from the beginning term of the study. Male students decreased by a total of 54.4% (-1034) from Fall 2008 to 866 (45.6%). Female students declined by 1017 (-52.8%) to 908 students enrolled in the Fall 2009. Table 4 demonstrates retention by gender.

Table 4.

Retention Enrollment Pattern for Fall 2009 by Gender

Gender Group	Enrolled Fall 2008 (Original Cohort)	Number Not Enrolled Fall 2009	Number Enrolled Fall 2009	Percentage Not Enrolled Fall 2009	Percentage Enrolled Fall 2009
Female	1925	1017	908	52.8	47.2
Male	1900	1034	866	54.4	45.6
Total	3825	2051	1774	53.6	46.4

Pearson Chi-Square χ^2 = .972, df=1, p= .324

Female students were retained at 47.2%, representing a 52.8% decline from Fall 2008. In rank order from lowest to highest percentage of female students by ethnicity remaining enrolled are: (5) African American – 38.7% (n=29); (4) White – 43.0% (n=401); (3) Asian/Pacific Islander – 45.8% (n=27); (2) Native American – 51.4% (n=37) and (1) Hispanic – 53.8% (n=375).

Part C: Persistence Fall 2008 to Spring 2010. Persistence by gender is illustrated in Table 5. Both male and female groups continued to decline in numbers from the Fall 2008.

Table 5.

Persistence Enrollment Pattern for Spring 2010 by Gender

Gender Group	Enrolled Fall 2008 (Original Cohort)	Number Not Enrolled Spring 2010	Number Enrolled Spring 2010	Percentage Not Enrolled Spring 2010	Percentage Enrolled Spring 2010
Female	1925	1085	840	56.4	43.6
Male	1900	1145	755	60.3	39.7
Total	3825	2230	1595	58.3	41.7

Pearson Chi-Square $\chi^2 = 5.981$, df=1, p= .014

Both student groups continued to decline in numbers. From Fall 2008 to Spring 2010, 56.4% of females did not persist. From Fall 2008 to Spring 2010, 60.3% of males failed to persist. This semester represents the first significant difference in enrollment by gender (p = .014).

Male students experienced continuing significant declines in all groups. Table 6 illustrates these decreases by ethnicity. Hispanic male students had the highest rate of persistence to the Spring 2010 semester with a rate of 42.8%. The lowest rate of persistence was exhibited by Native American males with a rate of 23.6% from Fall 2008 to Spring 2010. There was significance among the cohorts with a p value of .058.

Table 6.

Persistence Enrollment Pattern for Spring 2010 for Male Cohorts

Male Cohort Group	Enrolled Fall 2008 (Original Cohort)	Number Not Enrolled Spring 2010	Number Enrolled Spring 2010	Percentage Not Enrolled Spring 2010	Percentage Enrolled Spring 2010
Hispanic	690	395	295	57.2	42.8
White	881	537	344	61.0	39.0
African American	106	67	39	63.2	36.8
Native American	55	42	13	76.4	23.6
Asian	76	45	31	59.2	40.8
Total	1808	1086	722	60.1	39.9

Pearson Chi-Square $\chi^2 = 9.126$, df=4, p= .058

The Spring 2010 semester demonstrated the same continued decline for all female groups. Hispanic female enrollment concluded with 340 students, from beginning enrollment of 697 in Fall 2008 semester, representing a 48.8% persistence rate. White females had the second lowest persistence rate with 39.8% with 371 students remaining from a beginning n of 932. African American females had the lowest persistence rate of 34.7% which translates into 26 students, from 75. Native American females began with 72 students and ended with 33, reflecting persistence of 45.8%. Asian American females had the highest final persistence of 54.2% and 32 enrolled from a total of 59.

Research Question 2. ***What was the cumulative Grade Point Average (GPA) of each cohort by term during the time-period of the study?***

This question addresses the academic success of each cohort through the performance measure of GPA. The data is presented for each ethnic group by gender. The T-test was applied to compute standard deviation and standard error of the mean in

the average GPA calculated for male and female students. Overall, female students achieved a higher GPA in every term than male students. For all groups, irrespective of gender or ethnicity, the Fall 2008 semester produced the lowest GPA of any term. Each successive term resulted in a higher GPA for all students that persisted through the Spring 2010 semester.

Hispanic students. Tables 7, 8, 9, and 10 illustrate GPA by term for male and female students in this group. Significance by gender was found for every term of the study.

Table 7.

Average Grade Point Average (GPA) by Gender for Fall 2008 for Hispanic Students

	Number	Average GPA Fall 2008	Standard Deviation	Standard Error of the Mean
Male	690	1.924	1.33	.05
Female	697	2.217	1.26	.04

t = -4.200, df = 1379.703, **p** = .000

Table 8.

Average Grade Point Average (GPA) by Gender for Spring 2009 for Hispanic Students

	Number	Average GPA Fall 2008	Standard Deviation	Standard Error of the Mean
Male	451	2.163	1.06	.05
Female	488	2.408	.94	.04

t = -3.717, df = 901.728, **p** = .000

Table 9.

Average Grade Point Average (GPA) by Gender for Fall 2009 for Hispanic Students

	Number	Average GPA Fall 2008	Standard Deviation	Standard Error of the Mean
Male	338	2.312	.89	.04
Female	375	2.573	.77	.04

t = -4.145, df = 671.300, **p** = .000

Table 10.

Average Grade Point Average (GPA) by Gender for Spring 2010 for Hispanic Students

	Number	Average GPA Fall 2008	Standard Deviation	Standard Error of the Mean
Male	295	2.418	.77	.04
Female	340	2.569	.71	.03

t = -2.557, df = 633, **p** = .011

*White s**tudents***. Tables 11, 12, 13, and 14 illustrate the four semester GPA data. Significance by gender was found for every term of enrollment for White students.

Table 11.

Average Grade Point Average (GPA) by Gender for Fall 2008 for White Students

	Number	Average GPA Fall 2008	Standard Deviation	Standard Error of the Mean
Male	881	2.078	1.38	.04
Female	932	2.407	1.30	.04

t = -5.185, df = 1787.965, **p** = .000

Table 12.

Average Grade Point Average (GPA) by Gender for Spring 2009 for White Students

	Number	Average GPA Fall 2008	Standard Deviation	Standard Error of the Mean
Male	513	2.454	.99	.04
Female	513	2.651	.99	.04

t = -3.168, df = 1024, **p** = .002

Table 13.

Average Grade Point Average (GPA) by Gender for Fall 2009 for White Students

	Number	Average GPA Fall 2008	Standard Deviation	Standard Error of the Mean
Male	385	2.478	.88	.04
Female	401	2.692	.89	.04

t = -3.353, df = 784, **p** = .001

Table 14.

Average Grade Point Average (GPA) by Gender for Spring 2010 for White Students

	Number	Average GPA Fall 2008	Standard Deviation	Standard Error of the Mean
Male	344	2.470	.88	.04
Female	371	2.737	.81	.04

t = -4.197, df = 713, **p** = .000

African American students. Tables 15, 16, 17, and 18 illustrate the GPA data for this student group. The data for this student group is notable due to the much smaller N for each gender, and in comparison to Hispanic and White students. Statistical

significance in GPA is not demonstrated by gender for the first three terms, but is present in the fourth term. The lack of statistical significance is a function of the small N by gender. However, the GPA for males students did not continue to increase in the Spring 2010 semester. Despite the small number of students, statistical significance returned in the last term, due to the larger achievement gap in GPA by gender.

Table 15.

Average Grade Point Average (GPA) by Gender for Fall 2008 for African American Students

	Number	Average GPA Fall 2008	Standard Deviation	Standard Error of the Mean
Male	106	1.745	1.34	.13
Female	75	1.870	1.42	.16

t = -.604, df = 179, **p** = .547 (NS)

Table 16.

Average Grade Point Average (GPA) by Gender for Spring 2009 for African American Students

	Number	Average GPA Fall 2008	Standard Deviation	Standard Error of the Mean
Male	69	2.039	.97	.11
Female	41	2.296	1.11	.17

t = -1.265, df = 108, **p** = .209 (NS)

Table 17.

Average Grade Point Average (GPA) by Gender for Fall 2009 for African American Students

	Number	Average GPA Fall 2008	Standard Deviation	Standard Error of the Mean
Male	43	2.158	.90	.13
Female	29	2.220	1.01	.18

t = -.269, df = 70, **p** = .789 (NS)

Table 18.

Average Grade Point Average (GPA) by Gender for Spring 2010 for African American Students

	Number	Average GPA Fall 2008	Standard Deviation	Standard Error of the Mean
Male	39	2.021	1.01	.16
Female	26	2.554	.77	.15

t = -2.265, df = 63, **p** = .027

Native American/Alaskan native students**.** GPA differences by gender are shown in Tables 19, 20, 21, and 22. Males students in this group surpassed female students in GPA achievement in the Fall 2009 and Spring 2010 terms. Although not statistically significant, this is the only group in which males achieved higher semester cumulative GPA than females in their same ethnic cohort. The total N for this group ranks fourth in size, behind African-American, Hispanic and White students.

Table 19.

Average Grade Point Average (GPA) by Gender for Fall 2008 for Native American Students

	Number	Average GPA Fall 2008	Standard Deviation	Standard Error of the Mean
Male	55	1.745	1.30	.17
Female	72	2.200	1.28	.15

t = -1.966, df = 125, **p** = ..051 (NS)

Table 20.

Average Grade Point Average (GPA) by Gender for Spring 2009 for Native American Students

	Number	Average GPA Fall 2008	Standard Deviation	Standard Error of the Mean
Male	29	2.140	.89	.16
Female	44	2.506	.88	.13

t = -1.729, df = 71, **p** = .088

Table 21.

Average Grade Point Average (GPA) by Gender for Fall 2009 for Native American Students

	Number	Average GPA Fall 2008	Standard Deviation	Standard Error of the Mean
Male	21	2.406	.71	.15
Female	37	2.374	1.00	.16

t = .126, df = 56, **p** = .900

Table 22.

Average Grade Point Average (GPA) by Gender for Spring 2010 for Native American Students

	Number	Average GPA Fall 2008	Standard Deviation	Standard Error of the Mean
Male	13	2.657	.39	.11
Female	33	2.510	.81	.14

t = .619, df = 44, **p** = .539

Asian American/Pacific Islander students. Students in this group demonstrated the highest GPA in every term beginning in the Fall 2008 semester. Asian females were the only group to achieve a semester GPA of 3.00 or higher. However, this was only achieved for Spring 2009 term. Female GPA decreased in each consecutive term. Male GPAs continued to improve through each successive term.

Table 23.

Average Grade Point Average (GPA) by Gender for Fall 2008 for Asian Students

	Number	Average GPA Fall 2008	Standard Deviation	Standard Error of the Mean
Male	76	2.244	1.49	.17
Female	59	2.608	1.43	.18

t = -1.425, df = 133, **p** = .157 (NS)

Table 24.

Average Grade Point Average (GPA) by Gender for Spring 2009 for Asian Students

	Number	Average GPA Fall 2008	Standard Deviation	Standard Error of the Mean
Male	51	2.548	1.14	.15
Female	45	3.022	.90	.13

t = -2.230, df = 94, **p** = ..028

Table 25.

Average Grade Point Average (GPA) by Gender for Fall 2009 for Asian Students

	Number	Average GPA Fall 2008	Standard Deviation	Standard Error of the Mean
Male	39	2.647	.91	.14
Female	27	2.955	.91	.17

t = -1.341, df = 64, **p** = .185 (NS)

Table 26.

Average Grade Point Average (GPA) by Gender for Spring 2010 for Asian Students

	Number	Average GPA Fall 2008	Standard Deviation	Standard Error of the Mean
Male	31	2.672	.92	.16
Female	32	2.889	.82	.14

t = -.984, df = 61, **p** = .330 (NS)

Research Question 3. *What are the "top ten" programs of enrollment for each cohort during the time period of the study?*

This question was intended to elicit the most "popular" degree or certificate programs of choice, as determined by the number of students selecting available programs. The data demonstrates, by number and rank order, the majority of students,

both by gender and ethnicity who have selected Liberal Arts or General Studies as their number one or two choice. The third most popular selection was Business Administration, which is a transfer degree, "Courses for Transfer" was fourth, followed by the Associate of Science, and the Associate of Arts in Education as sixth.

Gender differences existed within ethnicity. Hispanic and White females demonstrated the greatest range of choices among females. White males exhibited the greatest range of choices among males. Of note in all cohorts, is that "General Studies" is often selected by students who are undecided but need a program that is eligible for federal financial aid. Table 27 illustrates the top ranked programs.

Table 27.

Top Ranked Programs Selected In First Term Enrolled – Rank and (Number Selecting)

Program Code Selected Fall 2008	Female African American	Female Asian	Female Hispanic	Female Native American	Female White	Male African American	Male Asian	Male Hispanic	Male Native American	Male White
Liberal Arts (Agec-A) AA	1 (24)	1 (24)	2 (214)	1 (26)	1 (263)	1 (33)	1 (19)	2 (166)	1 (18)	1 (238)
General Studies AGS	2 (20)	2 (14)	1 (221)	2 (23)	2 (261)	2 (30)	2 (18)	1 (207)	2 (12)	2 (179)
Courses For Transfer	3 (9)		5 (24)		3 (107)	4 (4)	3 (8)			3 (91)
Business Admin (ABUS) AB	4 (6)	3 (3)	3 (38)		4 (39)	3 (11)	4 (7)	3 (65)		4 (89)
Business Basic-Cert			9 (8)				5 (4)			6 (26)
Associate Of Science (AGEC-S) AS			4 (33)		6 (28)			5 (13)		5 (30)
(No Program) Courses for Personal Interest			8 (13)							
Practical Nursing Certificate			6 (16)		8 (18)					

Education AA			7 (14)		5 (37)				3 (3)	
Veterinary Technician AAS					7 (19)					
Forensic /Crime Scene Tech-Cert			10 (7)	3 (4)						
Culinary Arts AAS					9 (10)					
Admin Of Justice Studies AAS								4 (14)		
Liberal Art AGEC-A) Certificate										
Computer Systems Admin-AAS										7 (13)
Engineering AS										

NOTE: Only Programs Selected by 3 or more cohort members are noted for each cohort group.

Research Question 4. *What are the statistical comparisons within all male cohorts for the following performance indicators?*

a. *Enrollment and participation rate*

b. Persistence (semester-to semester)

c. Retention (Fall 08 to Fall 09)

d. Grade Point Average

- *by first semester (Fall 08)*
- *by cumulative (Spring 10)*

Enrollment and participation rate. The enrollment and participation rates for all male cohorts for the length of the study are illustrated in Tables 28, 29, and 30 below.

Table 28

Cross-tabulation: Enrollment Pattern for Spring 2009 for Male Cohorts

Male Cohort Group	Enrolled Fall 2008 (Original Cohort)	Number Not Enrolled Spring 2009	Number Enrolled Spring 2009	Percentage Not Enrolled Spring 2009	Percentage Enrolled Spring 2009
Hispanic	690	239	451	34.6	65.4
White	881	368	513	41.8	58.2
African American	106	37	69	34.9	65.1
Native American	55	26	29	47.3	52.7
Asian	76	25	51	32.9	67.1
Total	1808	695	1113	38.4	61.6

Pearson Chi-Square $\chi^2 = 11.706$, df=4, p= .020

Table 29

Cross-tabulation: Enrollment Pattern for Fall 2009 for Male Cohorts

Male Cohort Group	Enrolled Fall 2008 (Original Cohort)	Number Not Enrolled Spring 2009	Number Enrolled Spring 2009	Percentage Not Enrolled Spring 2009	Percentage Enrolled Spring 2009
Hispanic	690	352	338	51.0	49.0
White	881	496	385	56.3	43.7
African American	106	63	43	59.4	40.6
Native American	55	34	21	61.8	38.2
Asian	76	37	39	48.7	51.3
Total	1808	982	826	54.3	45.7

Pearson Chi-Square $\chi^2 = 9.126$, df=4, p= .058

Table 30

Cross-tabulation Enrollment Pattern for Spring 2010 for Male Cohorts

Male Cohort Group	Enrolled Fall 2008 (Original Cohort)	Number Not Enrolled Spring 2010	Number Enrolled Spring 2010	Percentage Not Enrolled Spring 2010	Percentage Enrolled Spring 2010
Hispanic	690	395	295	57.2	42.8
White	881	537	344	61.0	39.0
African American	106	67	39	63.2	36.8
Native American	55	42	13	76.4	23.6
Asian	76	45	31	59.2	40.8
Total	1808	1086	722	60.1	39.9

Pearson Chi-Square $\chi^2 = 9.126$, df=4, p= .058

The data reveal that the Fall 2008 to Spring 2009 semester enrollment pattern exhibited significance in enrollment behavior among male cohorts. All groups experienced enrollment declines ranging from 47.3% loss for Native American males, to a 32.9% loss in Asian male enrollment. The significance is derived from the amount of variation among groups. Table 27 also shows that, after Native American students, the

biggest declines in rank order were in White, African American, Hispanic, and Asian male students. The Fall 2009 and Spring 2010 semesters represent continuing decline in male enrollments in all cohorts. The total loss of students from Fall 2008 to Spring 2010 was 1086 students and is a 60.1% decline.

Persistence. Persistence rates for each male cohort was calculated based on continuing enrollment from the Fall 2008 semester through the Spring 2010 semester. From Fall 2008 to Spring 2009, Asian students persisted at the highest percentage (although a much smaller N, than any other group). In rank order of persistence were: Hispanic males (2); African American males (3); White males (4); and Native American males (5). Persistence rates from Fall 2009 to Spring 2010 changed the rank order (highest to lowest) to: Hispanic males (1), Asian males (2), White males (3), African American males (4), and Native American males (5).

Retention from Fall 2008 to Fall 2009. Representing the number of students who were enrolled in a Fall-to-Fall pattern, the decline from a beginning size of 1808 students to 826 students represented a loss of 982 or 54.3%.

In summary, the male cohort began with 1808 students and ended with 722 students, which is a total decline of 60%. In rank order from largest decline to smallest decline were: (1) Native American males at -76.4%; (2) African American males at -63.2%; (3) White males at -61%; (4) Asian males at -59.2% and Hispanic males at -57.5%.

Grade Point Average (GPA). As an indicator of academic success, GPA was selected as a data point and measure of comparison among groups. A Oneway

Analysis of Variance (ANOVA) was constructed for each semester among the male cohorts. Average GPA was calculated for each group as well as the Standard Deviation among groups. Significance was found for all semesters.

The Fall 2008 semester resulted in the lowest average GPA achieved for each group. Table 31 describes this outcome. Only two groups, Asian males (2.244) and White males, achieved an average GPA over 2.00.

Table 31

Oneway Analysis of Variance (ANOVA): Average Grade Point Average (GPA) for Fall 2008 for Male Cohorts

Male Cohort Group	Number in Cohort	Average GPA Fall 2008	Standard Deviation
Hispanic	690	1.924	1.33
White	881	2.078	1.38
African American	106	1.745	1.34
Native American	55	1.745	1.30
Asian	76	2.244	1.49
Total	1808	1.996	1.36

F (4,1803) =3.254, **p** = .011

Each following semester demonstrates an increasing GPA for all male groups. Rank order of achievement varies by term for each group, except for African American males who consistently achieved the lowest GPA for all semesters and Asian males who consistently achieved the highest GPA for all semesters.

Tables 32, 33, and 34 complete the data sets for each semester. There is significance in GPA among male cohorts in each term of the study.

Table 32

Oneway Analysis of Variance (ANOVA): Average Grade Point Average (GPA) for Spring 2009 for Male Cohorts

Male Cohort Group	Number in Cohort	Average GPA Spring 2009	Standard Deviation
Hispanic	451	2.163	1.06
White	513	2.454	.99
African American	69	2.039	.97
Native American	29	2.140	.89
Asian	51	2.548	1.14
Total	1113	2.306	1.03

F (4,1108) = 6.940, p = .000

Table 33

Oneway Analysis of Variance (ANOVA): Average Grade Point Average (GPA) for Fall 2009 for Male Cohorts

Male Cohort Group	Number in Cohort	Average GPA Fall 2009	Standard Deviation
Hispanic	338	2.312	.89
White	385	2.478	.88
African American	43	2.158	.90
Native American	21	2.406	.71
Asian	39	2.647	.91
Total	826	2.399	.89

F (4,821) = 3.127, p = .014

Table 34

Oneway Analysis of Variance (ANOVA): Average Grade Point Average (GPA) for Spring 2010 for Male Cohorts

Male Cohort Group	Number in Cohort	Average GPA Spring 2010	Standard Deviation
Hispanic	295	2.418	.77
White	344	2.470	.88
African American	39	2.021	1.01
Native American	13	2.657	.39
Asian	31	2.672	.92
Total	722	2.436	.84

F (4,717) = 3.365, p = .010

Overall improvement of GPA for each group, from the Fall 2008 to the Spring 2010 semester, is presented in rank order of highest to lowest gains over the period of study:

(1) Native American males, GPA Fall 2008 at 1.745 and GPA Spring 2010 at 2.657

(2) Hispanic males, GPA Fall 2008 at 1.924 and GPA Spring 2010 at 2.418

(3) Asian males, GPA Fall 2008 at 2.244 and GPA Spring 2010 at 2.647

(4) White males, GPA Fall 2008 at 2.078 and GPA Spring 2010 at 2.470

(5) African American males, GPA Fall 2008 at 1.745 and GPA Spring 2010 at 2.021

Chapter Summary

This chapter described the results of the study to identify academic achievement of minority males, White males, minority females, and White females from Fall 2008 to Spring 2010. 1808 males and 1835 females students were stratified in 10 cohort groups based on ethnicity. All students were in the 18-to-24 age group and were enrolled full time in the Fall 2008 semester. Comparisons were made within ethnicity by gender for

enrollment, persistence, retention and GPA. The same comparisons were made by gender. Analyses of the data demonstrated significant differences by gender, ethnicity and by gender within ethnicity.

Chapter Five: Discussion and Recommendations

Introduction

Chapter One provided an introduction and the contextual backdrop to outline the local and national concern regarding the academic achievement and educational attainment gaps among citizens age 18-to-24 and 25-to-34 in the completion of postsecondary education through the baccalaureate degree. Of growing unease is the knowledge that males, especially minority males, remain increasingly unprepared with the literacy, numeracy, and critical thinking skills required for college and workforce demands. This is seen as a growing crisis in Arizona and throughout the United States. Chapter Two was a review of current literature that focused on the 50 years of research to improve student persistence and retention in higher education. It focused on efforts to improve minority student achievement and access and the growing knowledge of gender and cultural differences in learning styles. Finally, it describes the slow and incremental efforts in institutional and national accountability for student achievement. Chapter Three described the research methodology to study minority male achievement at PCCCD from 2008 to 2010. Chapter Four presented the data from the research and analyses. In this chapter, the results are discussed along with recommendations for immediate application and for future study.

The purpose of the research was to profile minority male achievement for academic years 2008-09 and 2009-10 at PCCCD. It was a descriptive quantitative analysis of academic achievement by this group with specific performance indicators of

enrollment, persistence, retention, choice of academic program, and grade point average over four semesters. The groups selected for the study were male and female students, age 18-to-24, new-to-higher education, enrolled full time, and stratified into five groups by ethnicity and gender for a total of 10 cohorts. The sample size was 3,825 students and was approximately 50% male and 50% female. The significance of the study was to provide a detailed analysis of student achievement by gender within ethnicity, rather than by gender or ethnicity.

The results of the research demonstrated the following trends, for the 2-year period of time that was studied.

Enrollment Loss and Enrollment Gap

- Both male and female groups experienced a 40% loss in enrollment from the Fall 2008 to Spring 2009 semester, representing the total departure of 1468 full time students.
- Through the Fall of 2009, both groups continued to decline with an additional 14% loss in enrollment.
- By the Spring of 2010, females were still enrolled at a 4% higher rate than male students, but the overall decline was 56.4% for females and 60% for males.
- By the end of the Spring 2010 semester the total enrollment lost for both groups was 58.3%, or a total departure of 2230 full time students.

Enrollment by Ethnicity and Gender

- There were no significant differences by gender for White students.
- Hispanic females persisted at a 6% higher rate than Hispanic males.
- Hispanic males persisted at a higher rate than any other group of males by the end of the study.
- There were no significant differences by gender for African American students.
- Native American females persisted at 22% higher rate than Native American males.
- Native American males had the lowest rate of persistence.
- Asian females persisted at a 14% higher rate than Asian males.

Choice of Academic Programs

- For all students, the Liberal Arts, Associate of Arts and the General Studies degree were the top two choices.
- The frequency of the choice of the General Studies degree may indicate a high number of undecided students that would benefit from focused goal identification and career planning.
- These degree choices are not consistent with the projected workforce demands for higher skills in math, science, and technology.

Grade Point Average

- The Fall 2008 semester resulted in the lowest GPA for all student groups.
- Females had a significantly higher grade point average than males for every

semester.

- Asian females had the highest GPA for every semester among female students.
- Asian males had the highest GPA for every semester among males.
- White males had the second highest GPA, followed by Hispanic male students.
- Native American males demonstrated the greatest improvement in GPA over the four semesters.
- African American students had the lowest GPAs for each semester, although both males and females demonstrated improvement.

Recommendations for Application to Current Practice

Pima Community College students have access to a wide array of services that include: newly renovated Student Service Centers at every campus based on a model of teaching and learning; academic support services such as free tutoring and open access to academic computing commons; online availability of all student processes from admission through graduation; student success curriculum and targeted programs for Hispanic males, single parents, first generation students, students with disabilities and veterans. Despite these efforts, many of which are aimed at the students who were the subject of this study, there remains much work to be done to improve educational success and attainment of students age 18-to-24. Other areas of disconnect that were found can be seen in the data about the Top Ten Academic Programs of selection for these groups. The Associate of General Studies (AGS) degree is often the choice of students who are undecided about their program or major. Students may well benefit from focused goal development and targeted career planning services. Data from this

question also demonstrates that the number one choice of all groups is the Associate of Liberal Arts. This is in direct contrast to the identified areas of growing workforce demand in Pima County and Southern Arizona, which will be in technology and science based economies. The recommendations to impact immediate practices are below:

- The College should implement efforts to increase student engagement.
- The 40% loss of enrollment, by the end of the first semester in this age group, strongly suggests that the use of an instrument such as the Survey of Entering Student Engagement (SENSE) would be of great value.
- The continued decline of enrollment, persistence, and retention by gender and ethnicity strongly suggests that the use of an instrument such as Community College Survey of Student Engagement (CCSSE) would enhance institutional knowledge of (1) active and collaborative learning, (2) student effort, (3) academic challenge, (4) student faculty interaction, and (5) support for the learner.

Recommendations for Further Study

Community colleges would greatly benefit from further study of instructional effectiveness. Recommendations are:

1. Design and implement a analysis of courses, by discipline and instructional methodology, to determine success and failure rates.
2. Design and implement a study of preferred student learning styles and the implications for changes in instructional methodology.
3. Design and implement a survey to be implemented with students who have left a

college to determine reasons for leaving.

Final Conclusion

This research presents an analysis of minority male academic achievement at Pima County Community College District. It is the first presentation of data about specific rates of persistence, retention and GPA by gender within ethnicity. The data demonstrate that African American, Native American, and Asian American students are participating at the lowest rates. Although partially driven by the population base, the African American and Native American students appear to be the most academically at risk. Hispanic and White students exchange rankings by semester for persistence, retention, and GPA. Hispanic male GPA lags behind the GPA of Hispanic females, White females, and White males.

What is particularly disturbing is the 60% loss of enrollment in both male and female, new-to-higher education, full time students from the first semester of attendance. Educational attainment and goals for completion will not be achieved with students exiting the College these rates. In the two years covered in this study, male students, enrolled full time, left the college after the mid-point of the semester at egregious rates. By the completion of the Spring 2010 semester, the remaining numbers of male students were:

1. Hispanic –295 of 610 (-57.2%)
2. White – 344 of 881 (-61%)
3. African American – 39 of 105 (-63.2%)
4. Native American – 13 of 55 (-76.4%)

5. Asian – 45 of 76 (-59.2%).

Tallies for female students, although they persisted at higher numbers as a group, were not positive overall. They were:

1. Hispanic – 340 of 697 (-51.2%)
2. White – 371 of 932 (-70.2%)
3. African-American – 26 of 75 (-65.33%)
4. Native American – 33 of 72 (-54.17%)

This represents an enormous loss of effort and resources by students, faculty, and staff as well that as of local, state, and federal funds.

In 2009, PCCCD became part of the original group of community colleges participating in the Voluntary Framework of Accountability Initiative (VFA) in partnership with AACC and ACCT. As a result of this commitment, the College has completed additional analyses of instructional effectiveness and has discovered that ten years of the delivery of developmental education has produced failing results for almost all students in these classes. While students may pass these courses with grades of "C" or better, less than 6% go on to successfully complete college level courses. At an annual cost of $23 million to deliver these courses, there is no "lipstick" that can disguise negative success rate of porcine proportion. This is paired with the recent release of data from Planning and Institutional Research that online instruction has poor academic success rates for the majority of student enrolled in these courses.

Roueche and Roueche (1999) spoke to the importance of knowing the student when they stated, "As the French observe, 'You cannot teach French to Johnny until first

you *know* Johnny'" (p. 18). While we are gaining understanding of what does not work, we do not *know* Johnny. The time has come to *know* Johnny, Silvia, Constance, Reynaldo, and Ahmad.

Appendix A

Computer Literacy Resources: From Learning to Use a Computer to Maximizing its Educational Potential

Computer skills not up to par? Need help with researching or producing a class assignment? Here are some suggested resources:

Basic Computer Skills Sessions – Free Basic Computer Skills Sessions are offered each semester. These sessions provide an introduction to the building blocks of computer skills, from maneuvering the mouse to navigating the Web. You will learn how to access various Web sites that offer tutorials in basic computer skills. The fall schedule is on the back of this flier and is regularly updated at www.pima.edu/calendars/.

Computer Classes – Take a basic computer skills class to brush up or build your skills. Pima has credit and noncredit classes in a variety of formats, including regular classroom, self-paced and online. As you plan your schedule of classes, ask your advisor which computer course might be best for your individual needs. Pima's Schedule of Classes is available at all campuses, at various locations around town and at www.pima.edu.

Computer Commons – All campuses have computers that students can use for word processing, to check e-mail and to log onto the Internet. Computer Commons staff can provide basic technology assistance on a walk-in basis and also are available for short appointments to get you started.

PCC Library – The PCC Library links to a variety of online resources for developing your computer skills. From www.pima.edu/library/, click on "Online Resources," then "Web Study Guides by Subject," then click on "computer skills" to get to the "Internet Resources For Computer Skills" page. The PCC Library also can help you with your research needs. Support is available for research with a subject or project through the Library's databases, also found at www.pima.edu/library/.

Pima County Public Library – The Pima County library system offers free computer classes, including sessions on the basics, the Internet and Microsoft Word, Microsoft Excel, PowerPoint and more. Contact your local branch for more information or see the schedule at www.library.pima.gov/computerclasses/.

Online Videos and Tutorials – A number of Web sites offer basic computer skills and more advanced information. Microsoft.com is one that provides a range of videos and tutorials, including How to Use the Mouse, PowerPoint and Excel. Access this site through www.microsoft.com.

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Vita

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